

## ABSTRACT OF THE DISCLOSURE

A dither system for a quantizing device, such as a multi-stage pipelined analog-to-digital converter (ADC), derives a dither signal from a clock signal having a sample frequency, the dither signal having a frequency that is one-  
5 third of the sample frequency. The dither signal is easily converted to analog and added at the input of the quantizing device to an analog signal to be digitized. A cancellation signal circuit generates a cosine-wave signal from a digital version of the dither signal and programmable coefficients that are a function of amplitude and phase. The cosine-wave signal is combined with  
10 the digital output signal from the quantizing device to produce a corrected digital output signal having reduced quantization distortion.